



City of Nashua
Division of Public Works

Major Wastewater Projects

- Combined Sewer Overflow (CSO) Mitigation
 - Collection System Sewer Replacement
- Wastewater Treatment Plant Equipment Upgrades

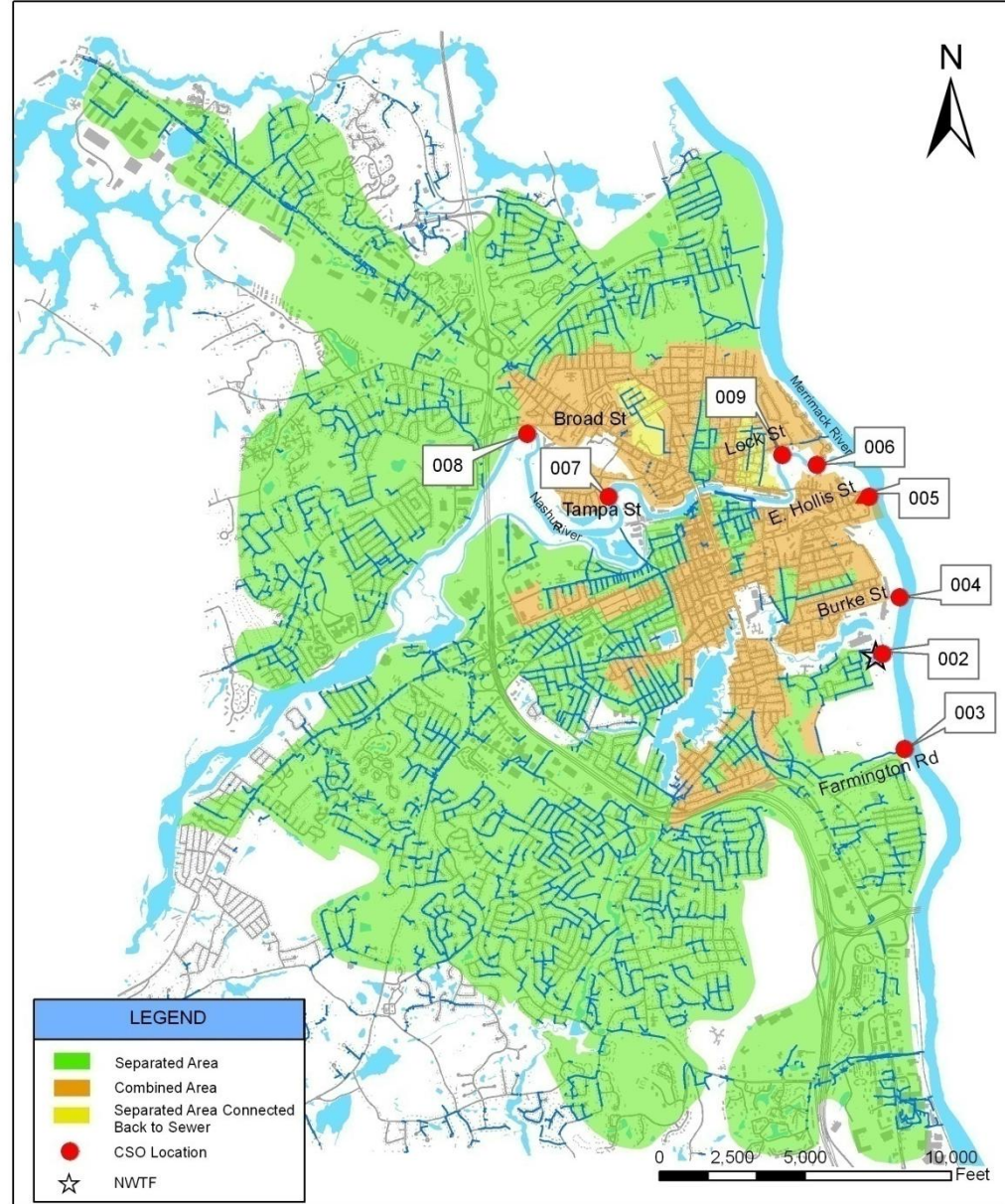
Nashua Wastewater System

I. Collection

- 190 miles separated sewers
- 100 miles combined sewers in Inner City
- 8 CSO Outfalls
 - 4 Nashua River
 - 4 Merrimack River
- 13 sewage pump stations
- 130 miles storm drains
- 19, 500 catch basins and manholes

II. Nashua Wastewater Treatment Plant

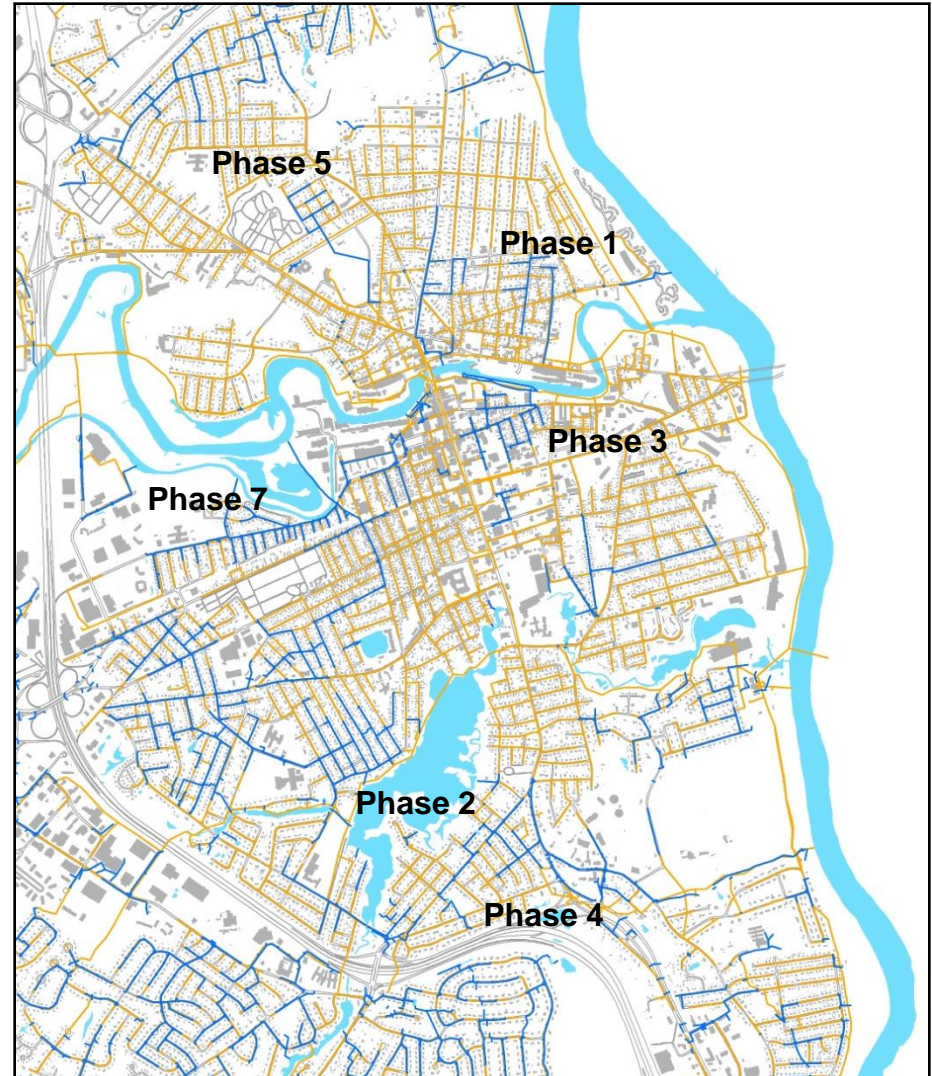
- Average Dry Weather Flow - 11 Mil Gal/Day (MGD)
- 50 Mil Gal/Day Wet Weather Capacity
- Wet Weather Flow Treatment Facility - 60 Mil Gal/Day Capacity



1999 EPA CSO Administrative Order: Complete Sewer Separation

- To separate 110 miles of combined sewers in 20 years –
Est. \$250 Million

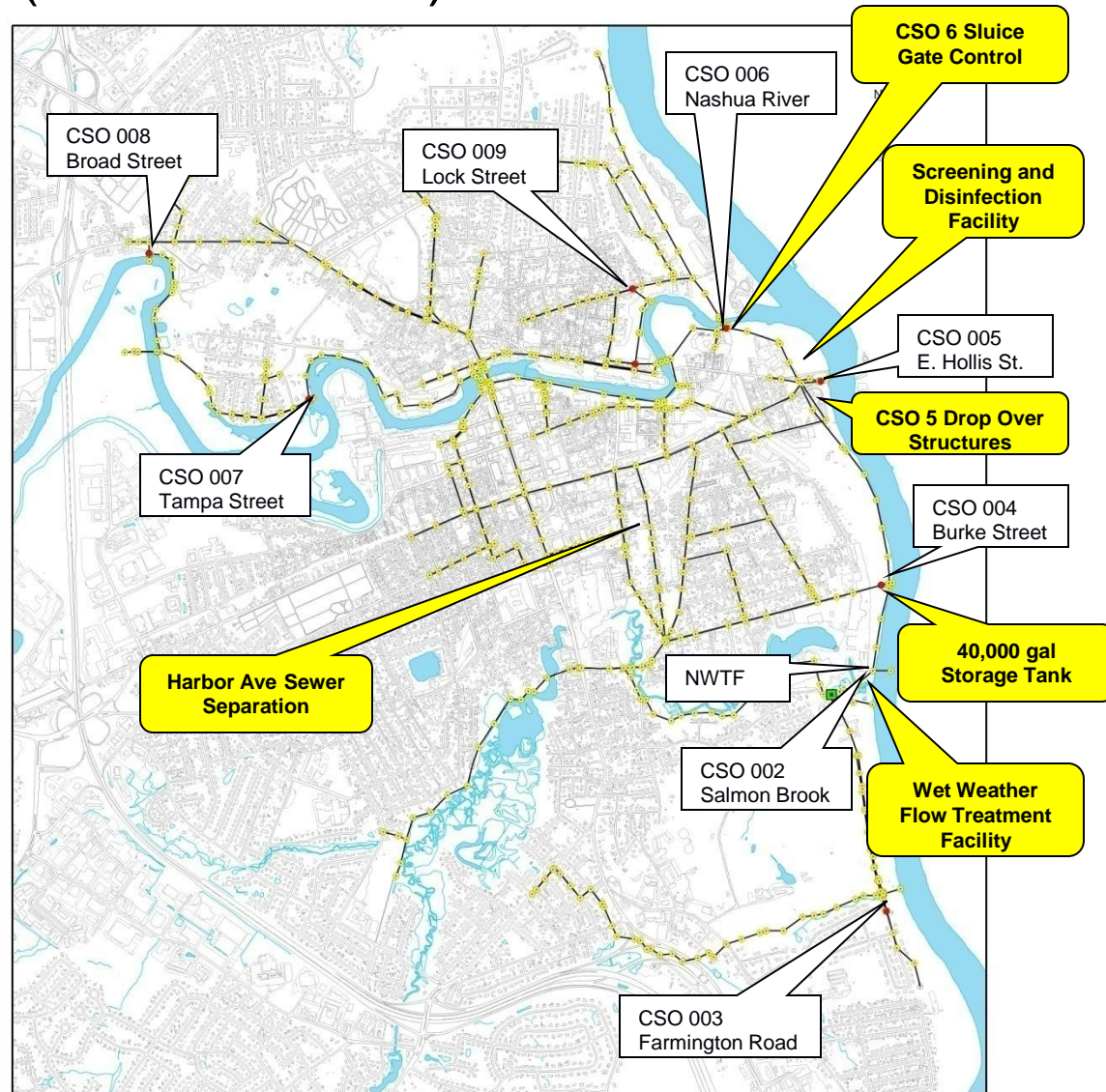
Phase Completed	Project Name	Miles of separated sewers
Phase 1	French Hill	2.10
Phase 2	East Dunstable Rd	2.16
Phase 3	Temple St/E. Pearl St	1.55
Phase 4	Main St/ South Main St	1.20
Phase 5	Sargents Ave	1.08
Phase 7	Ledge St	0.88
Total	About \$24.1 Million	8.97



2005 EPA CSO Consent Decree (Modified 2009)

Major Projects:

1. Wet Weather Flow Treatment Facility 60 MGD
2. System Optimization of CSO Regulators
3. CSO 005 Drop Over Structures
4. CSO 006 Sluice Gate Control
5. Harbor Ave Sewer Separation
6. Screening and Disinfection Facility 91 MGD
7. 40,000 Gallon Storage Tank near CSO 004



2005 EPA Consent Decree Modified CSO Program Project Costs

	Project	Total Cost in \$ Million	Project Status
1	Wet Weather Flow Treatment Facility, 60 MGD	\$32.37	Operational
2	System Optimization of CSO Regulators	\$1.81	Operational
3	Drop Over Structures near CSO 5	\$1.52	Operational
4	Sluice Control	\$0.87	Operational
5	Harbor Ave Sewer Separation	\$5.43	Operational
6	Screening and Disinfection Facility, 91 MGD	\$19.78	Design Completed
7	(i)Storage Facility/(ii)Burke St Infrastructure	\$6.00	(i)Tank Construction started (ii) Burke St 20 % designed
8	Operational Projects - Monitor/Mtce Plans	\$1.23	Ongoing
9	Inflow/Infiltration Removal Projects	\$0.50	Completed
Total		\$69.51	

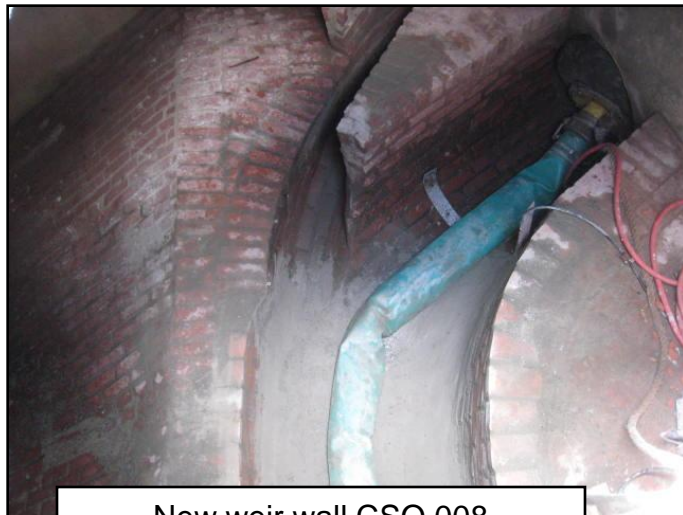
Wet Weather Flow Treatment Facility

- Treats 60 Mil Gal/Day of wet weather flow
- Put in service January 2009
- Project Cost \$32.37 Mil



System Optimization of CSO Regulators

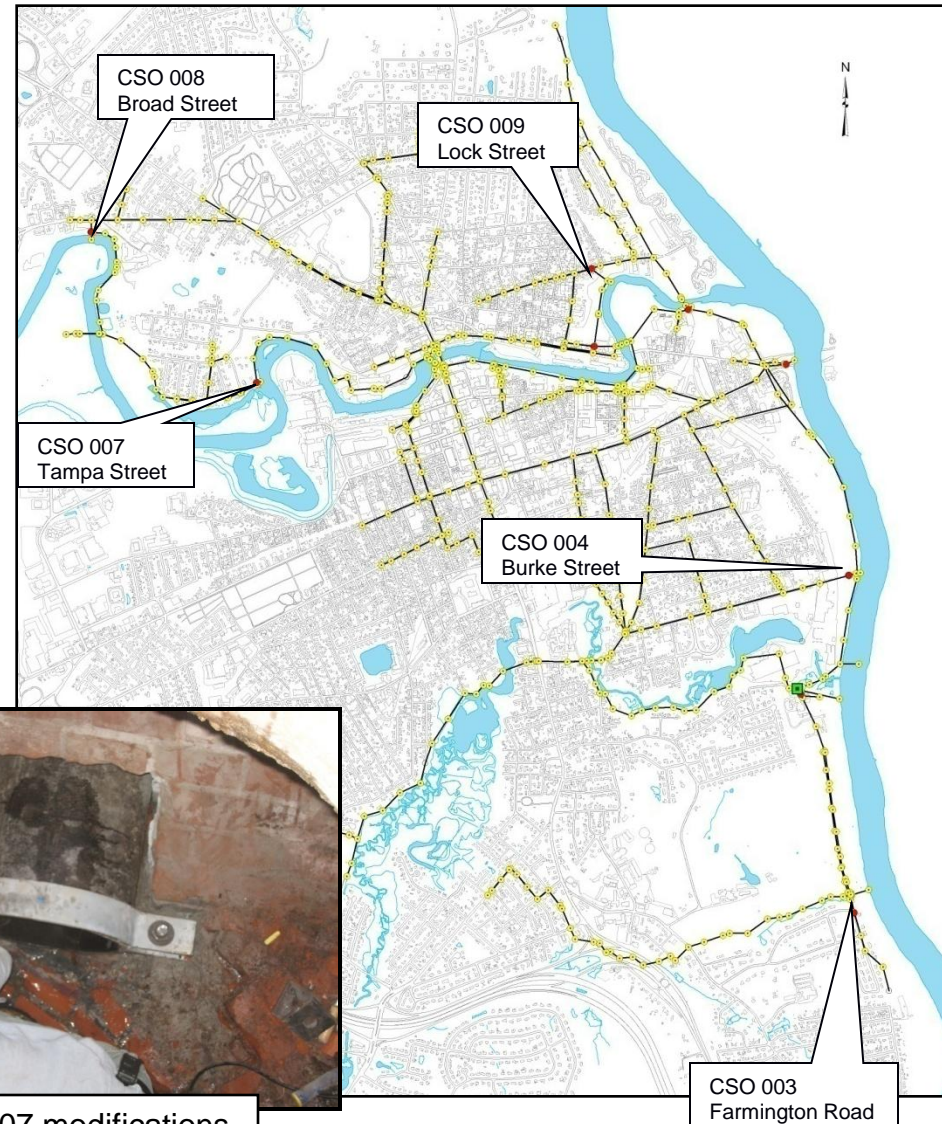
- Maximizes use of existing interceptor storage and transport capacity
- Locations CSO 3, CSO 4, CSO 7, CSO 8, and CSO 9
- Project Completed June 2009
- Project Cost \$1.81 Mil



New weir wall CSO 008

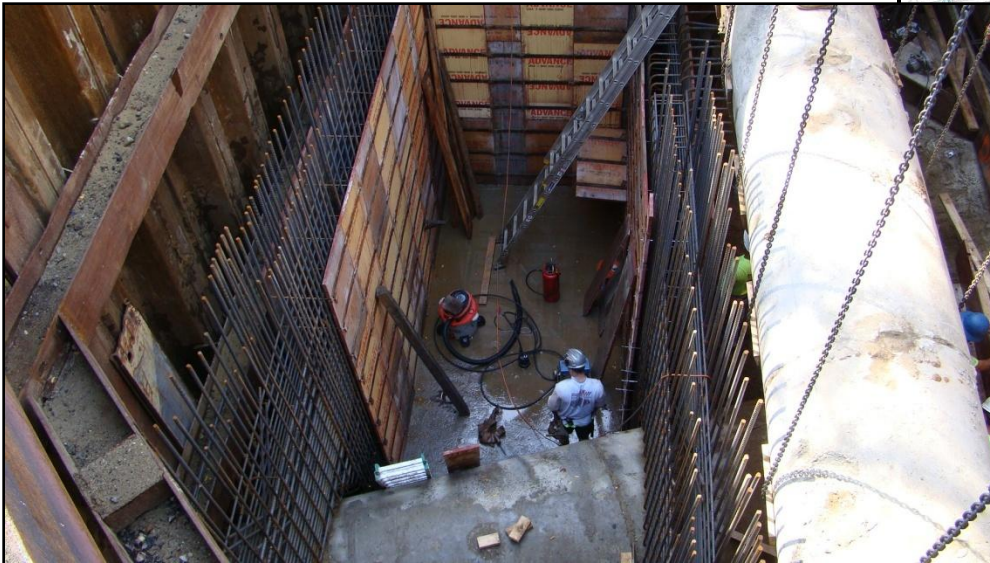
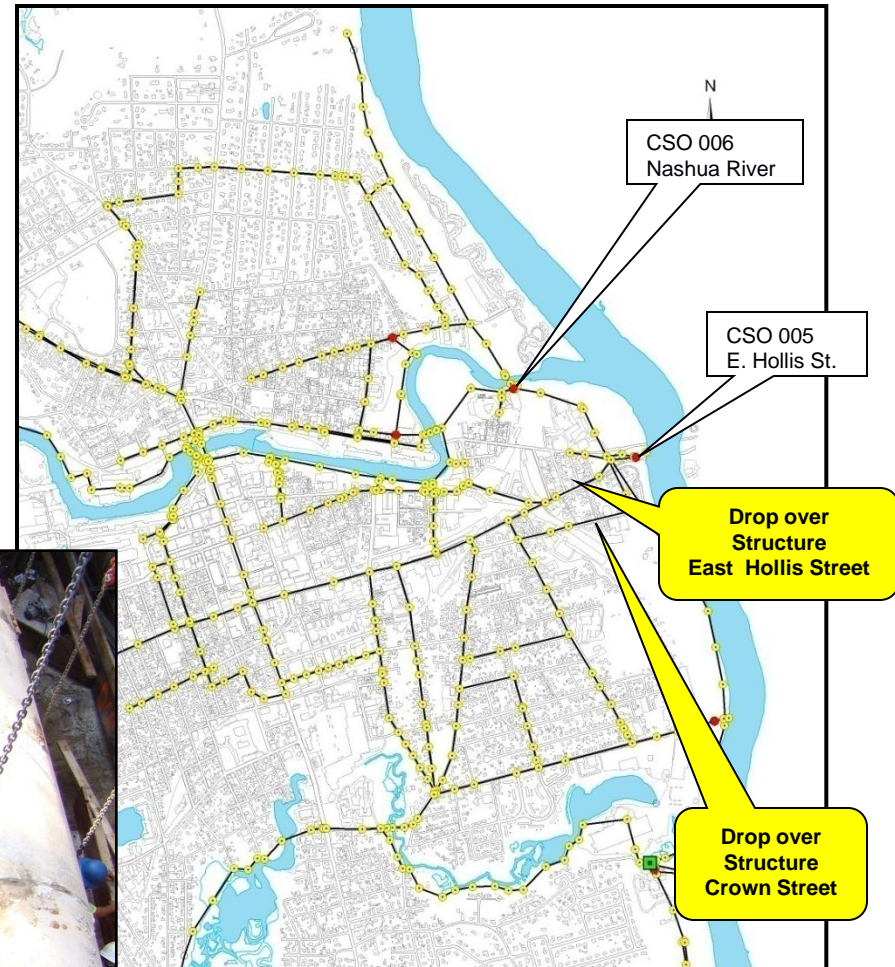


CSO 007 modifications



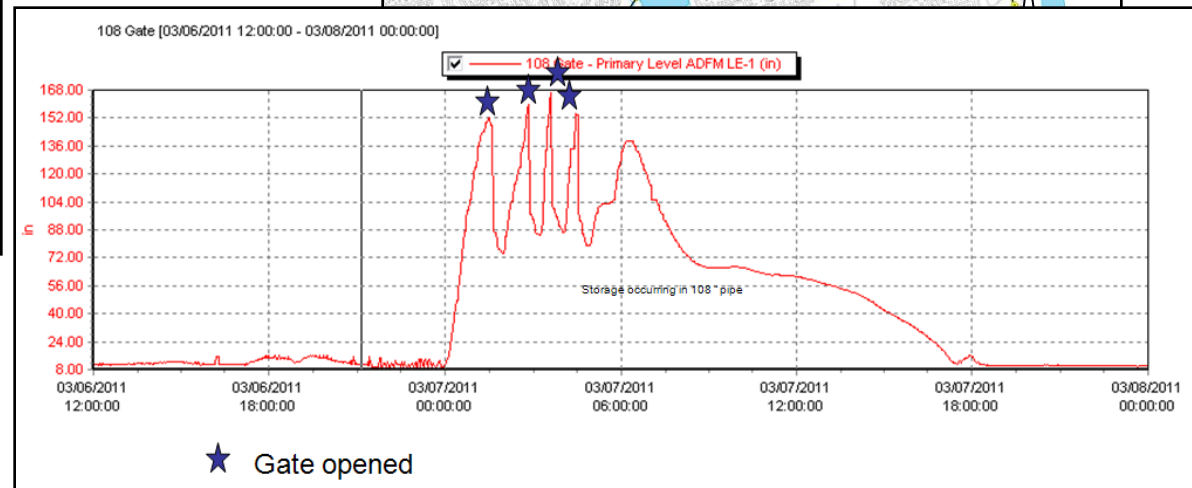
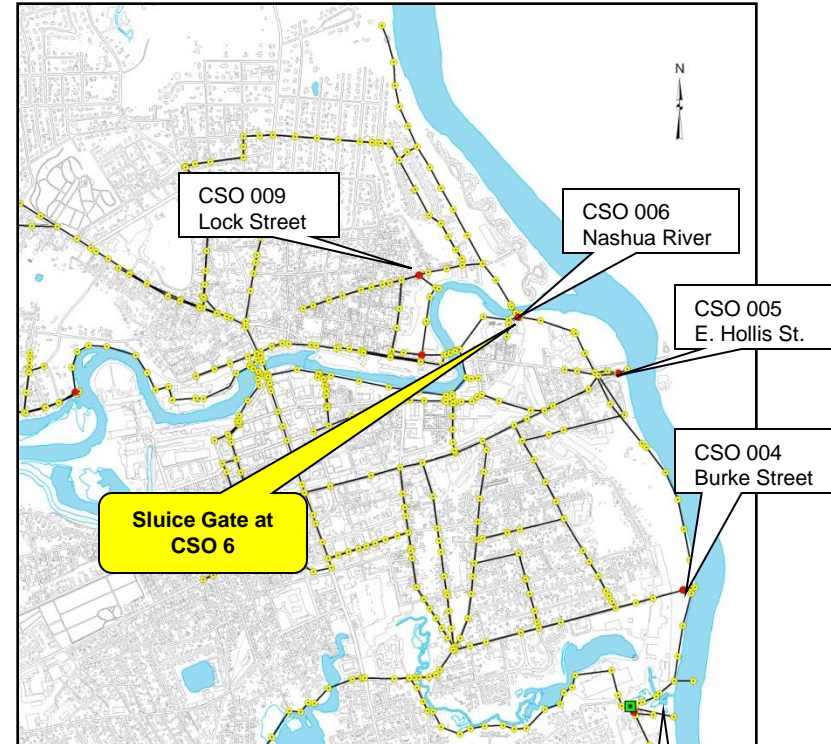
Drop Over Structures near CSO 005

- Diverts flow to the WWFTF via the North Merrimack River Interceptor
- Put in service December 2010
- Project Cost \$1.52 Mil



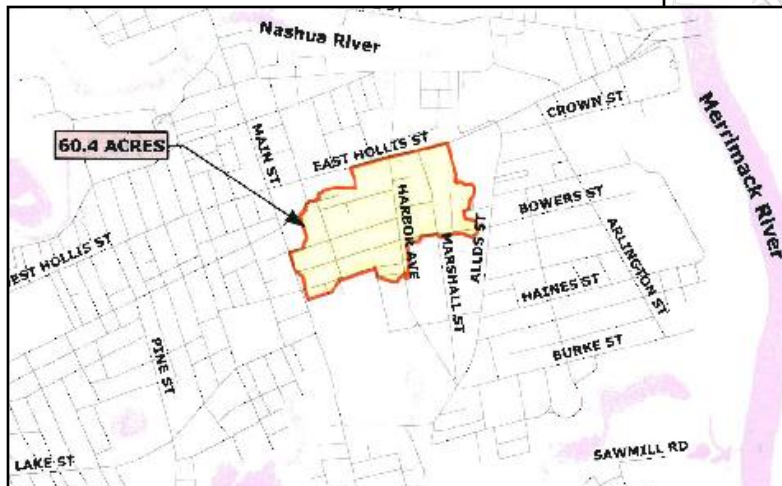
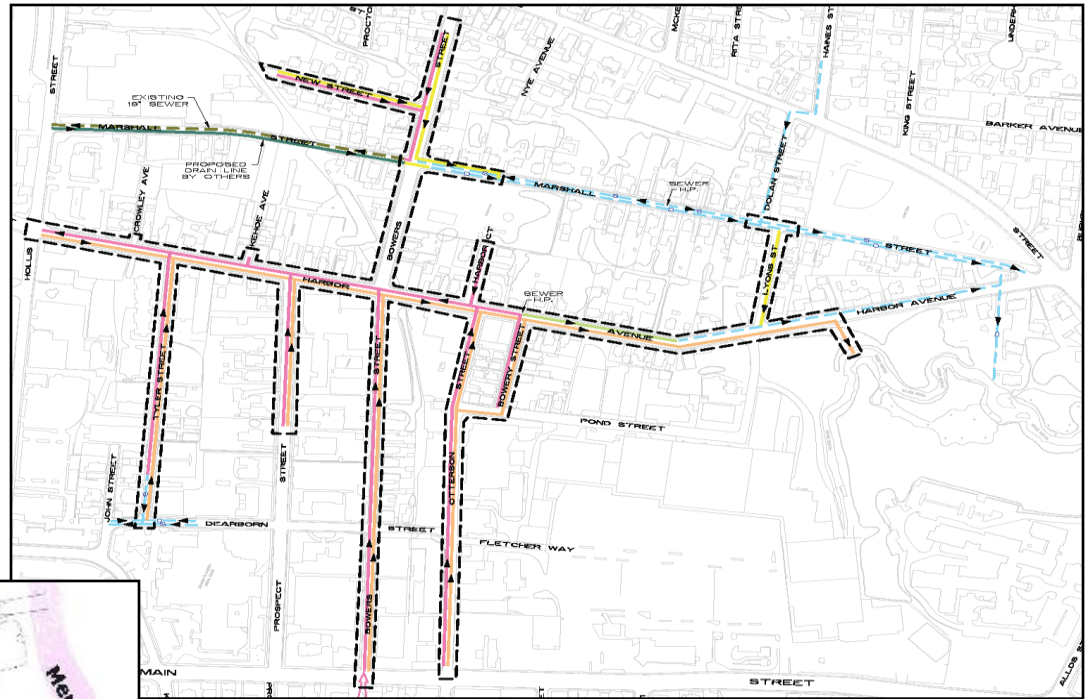
Sluice Gate Control at CSO 006

- Holds back wet weather flow in 108 inch Nashua River Interceptor and releases for treatment
- Put in service November 2010
- Project Cost \$0.89 Mil



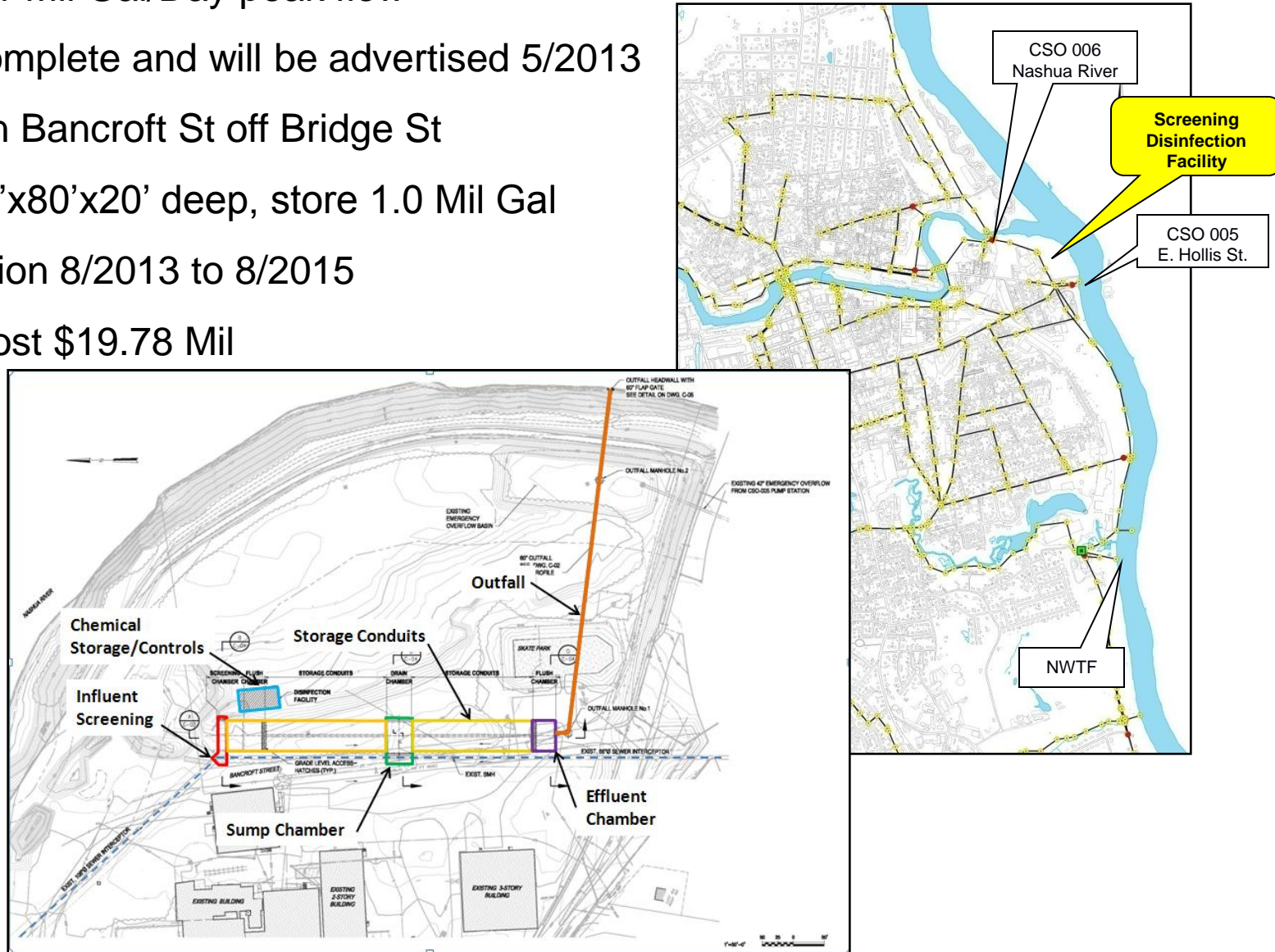
Harbor Avenue area Sewer Separation

- Separation of 1.5 miles combined sewers, 60 acres
- Reduces localized flooding and basement backups
- Pipes in service 10/1012
- Final Road Restoration June 2013
- Project Cost \$5.43 Mil



Screening and Disinfection Facility

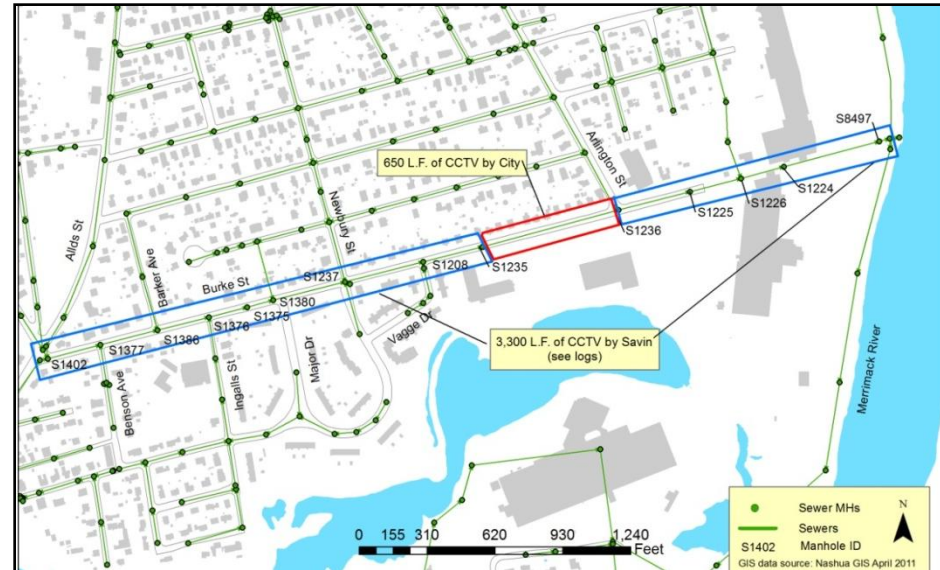
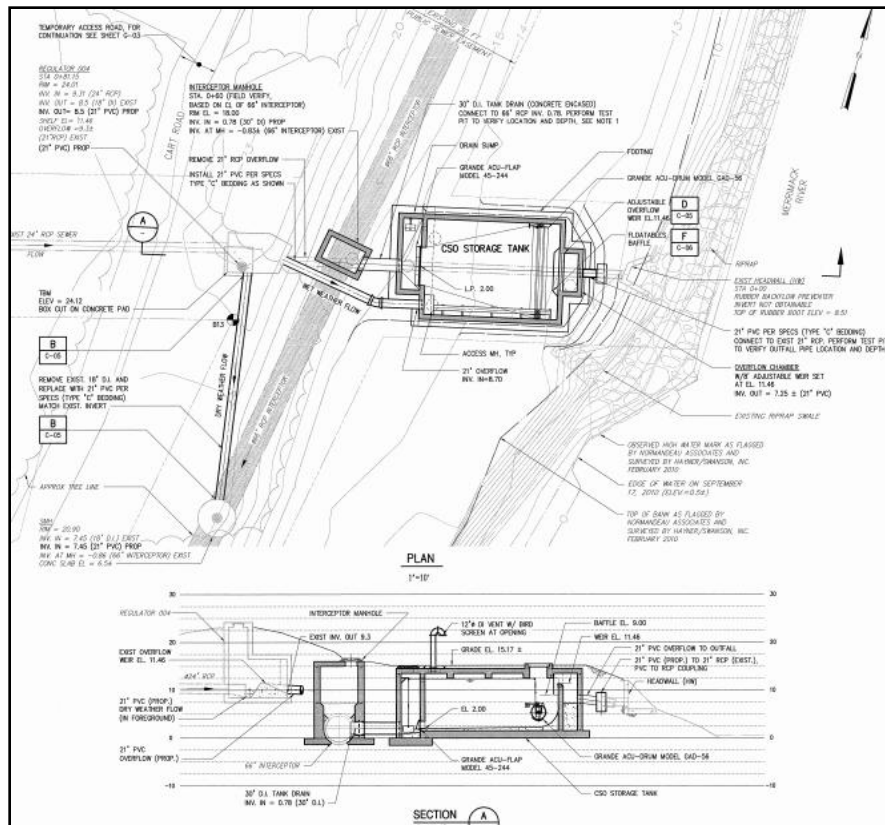
- To treat 91 Mil Gal/Day peak flow
- Design complete and will be advertised 5/2013
- Located in Bancroft St off Bridge St
- Tank 400'x80'x20' deep, store 1.0 Mil Gal
- Construction 8/2013 to 8/2015
- Project Cost \$19.78 Mil



CSO 4 Storage Tank/Burke St Infrastructure

I. Storage Tank

- Design completed – 40,000 gal
- Construction started April 2013



II. Infrastructure Improvements

- Lining 24 in sewer and 2 new manholes – construction fall 2013
- Lateral replacement, street paving, utility upgrades

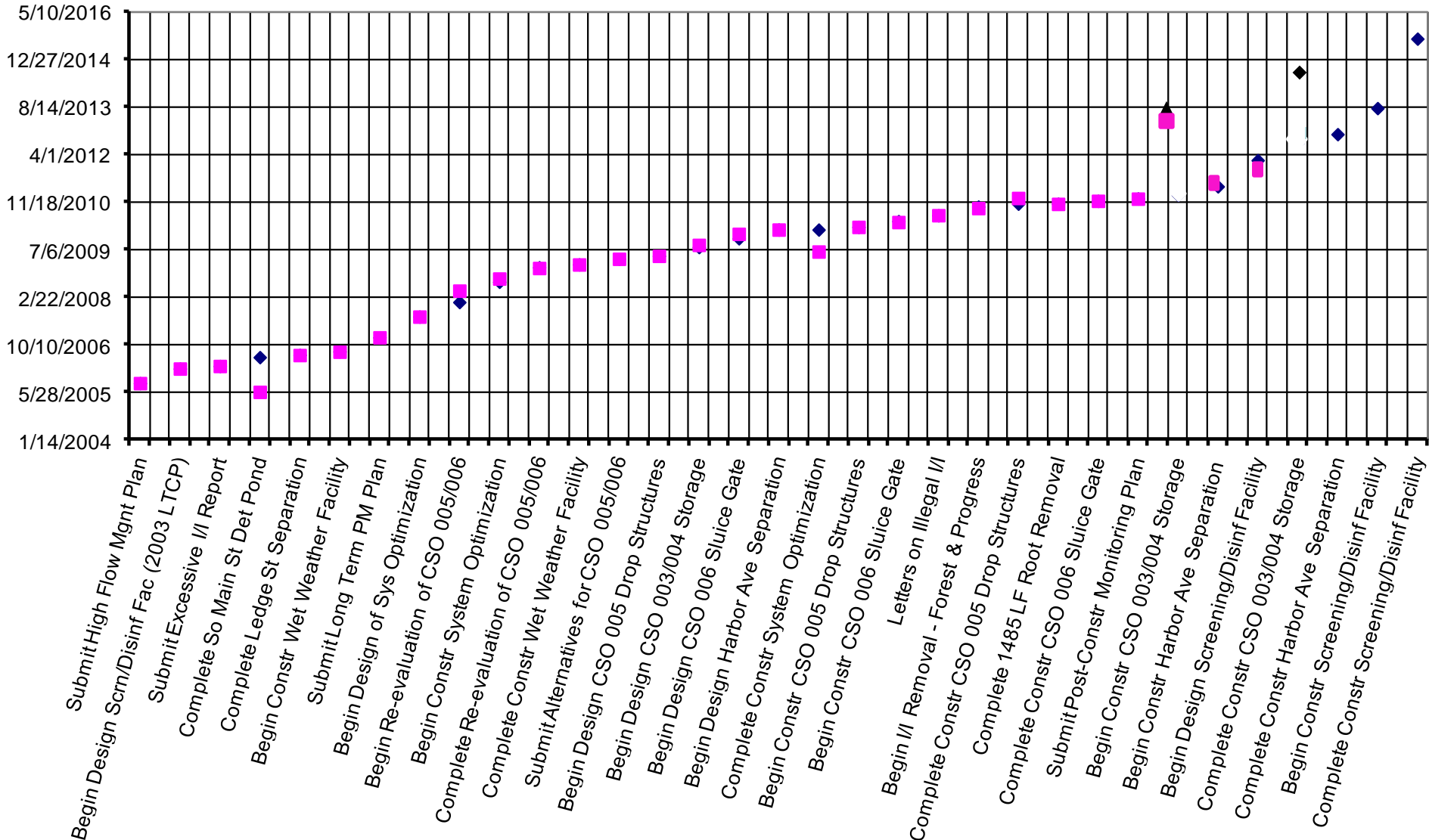
Total Budget \$6.00 Million

CSO Consent Decree Milestones

Legend

◆ Due Date
■ Actual

Dates



Milestones

Sewer Replacement Projects

Year	Length of Sewer	Cost/Completion
2006 – 2010	12,750 LF	Completed for approx \$3.3 Mil
2011	3,500 LF	\$1.58 Mil completed
2012	6,000 LF	\$3.94 Mil, 80% completed
2013	6,650 LF	\$1.65 Mil starting May 2013
2014 to 2019	5,000 LF/YR	\$ 1.32 Mil increasing 5% per year

Wastewater Plant Upgrades

Completed Projects	Year	Cost/Completion
Digester	2001	\$10 Mil
Main Gate	2005	\$0.1 Mil
Primary Clarifiers	2005-2007	\$5.4 Mil
Grit Cycle Blowers	2007	\$0.24 Mil
Net Metering	2010-2011	\$0.50 Mil
Current Projects		
Aeration Blowers and Secondary Clarifiers	2012-2014	\$4.16 Mil, 10% complete
Dewatering Equipment and Grit System Upgrade	2011-2013	\$5.57 Mil, 50% complete
Proposed Projects		
Scheduled Equipment Replacement	2013-2019	\$11.32 Mil Total in 9 Years, ongoing